GEOGRAPHIC SCHOOL BULLETINS

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VOLUME 37, NUMBER 17, FEBRUARY 9, 1959 . . . *To Know This World, Its Life*

► Austria Steps to a New Tune

► The Cold Life of the Tundra

► Lincoln Sesquicentennial

► Oregon Grows Like All Outdoors

GEMÜTLICHKEIT, the good-humored, relaxed outlook on life for which their nation is famous, shines from the faces of this Austrian couple. Their holiday costumes show the influence of Croatians, one of the many racial strains working together to build a new and prosperous free Austria.

NATIONAL GEOGRAPHIC PHOTOGRAPHER VOLKMAR WENTZEL

soon free us from dependence upon imported coal. And it helped us develop our newest natural resource: oil."

The most important asset of the country, Raab pointed out, is the industriousness of its people. Mr. Bowie asked if concentration on economic recovery has changed their character, traditionally fun-loving.

"Up to quitting time, yes," he replied. "Today we work more and faster than before. But we have still the same love for music, for a good book, for leisurely get-togethers.

A VIENNESE FAMILY plays Mozart on instruments dating from his time, while University of Vienna youngsters jump to a real gone beat in the "Student Cellar" decorated with Picasso-like paintings.

All in all, I'd say we have become a little Americanized by day. But in the evening we are Austrians still."

The love of music is an old Austrian trait that made Vienna the musical capital of the world. It nourished such geniuses as Mozart, Beethoven, Schubert, Brahms, and the Strausses.

Their memories are venerated and their music performed in concert halls and private homes (above, right). But young Viennese pulse to new tempos as well—such as the rock 'n' roll version of *Besame Mucho* sending the cats above.

UMI

Austria Hits New Tempo

Photographs by National Geographic Photographer Volkmar Wentzel

RHYTHMS CHANGE, but the Austrian song goes on.

As sunset weaves a nocturne over the Danube Canal in the heart of Vienna (above), Austrians walking its banks can hear in memory the heavy cadences of Russian army boots.

It has been only three short years since this small land lying between Eastern and Western Europe was an occupied country—held jointly by the United States, Russia, Britain, and France. Vienna, the capital, was split into sectors as Berlin still is.

Now the Austrians have taken charge of their own destiny, and foreigners in Vienna carry guide books instead of pistols.

Putting aside former political differences and economic apathy, the people are firmly confident they can build a sound and prosperous society in new freedom.

A swelling theme of growth counterpoints the gay Viennese waltz. Since prewar days farmers have raised their yields by 20 percent; vehicle production has tripled; iron smelting and electric power have quadrupled. And the flow of oil from wells in Lower Austria has shot up fiftyfold!

When Assistant Editor Beverley M. Bowie of the *National Geographic Magazine* was in Austria recently, Federal Chancellor Julius Raab told him how American help started his country toward prosperity:

"Marshall Plan aid," he said, "enabled us to modernize several of our most vital industries—iron and steel, lumber and paper, to mention only a few. It also allowed us to start building bigger hydroelectric power plants, plants that will

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The castle's kitchen has a chimney hood 15 feet square, and spits that could roast whole oxen to feed its defenders. An almost bottomless well provides a source of water inside the walls.

In Forchtenstein's highest watchtower hangs a bell called Tota, after a 13th-century countess. Her brother ordered the bell hung there to ring out at sunrise and sunset in her honor. The belle has gone; the bell remains, still ringing in remembrance.

In today's world, fortifications like Forchtenstein Castle are of little use in war. Its weapons are valueless in the face of an intercontinental ballistic missile. But another old Austrian custom—tactful diplomacy—may prove more fruitful.

Pledged to neutrality, Austria stands as a bridge spanning the frontiers of the cold war. Her freedom itself is a monument to long, dogged, flexible diplomacy.

Already Vienna has been chosen as the location for the International Atomic Energy Agency, the offspring of President Eisenhower's "Atoms for Peace" proposal. And there has been agitation to make the city the capital of the Council of Europe, advance guard of the hoped-for United States of Europe.

From month to month Vienna entertains scores of other international groups: journalists, biochemists, historians, geologists, bankers.

To this demanding role as host, mediator, and diplomat, Austria brings deep-rooted talents. Viennese enjoy retelling a century-old legend that illustrates these abilities:

"This is where the delegates first met for the great Congress of Vienna in 1815, at which the fate of Europe was determined," said one. "Originally, the conference room had only four doors, and the problem was this: How could the crowned heads of five proud states agree on who was to enter and leave first?"

As the host, Austria made a simple and characteristic decision. Overnight, another door was cut into the hall.

At the critical moment, without loss of honor, all the monarchs who were guests in Vienna—The Tsar of Russia and the Kings of Prussia, Denmark, Bavaria, and Württemberg—could step across the threshold at the same time.

"The doors are still there," Mr. Bowie writes in the February *National Geographic*. "And Austria is still prepared to open them."

F. S.

Austrians go their tuneful, hardworking way almost surrounded by Communist nations —Czechoslovakia, Hungary, and Yugoslavia ring it on the north, east, and south. But Austrians emphatically reject Communism as a way of life. They know it as the iron fist that drove almost 180,000 Hungarian refugees into their country during the 1956 rebellion. The flood has ceased, but a trickle of gray faces still manages to cross barbed wire and minefields to freedom, dodging trained dogs and dour guards vigilant in rickety watchtowers.

Along the same route, down the centuries, came the refugees —and armies—of a thousand battles. Always ready for defense, Austrians built castles, designed even their farmhouses as forts. The 300-year-old sample at right opens on a sunny courtyard, leaving the outside tightly closed for protection.

Hun and Avar and Magyar and Turk and Russian battered at Austria's eastern provinces through 750 years. In one seven-year period of "peace" the Turks launched 188 different attacks. "We have always been a border country," declared one yeoman. "We are a border country still—and we will hold fast!"

This requires stout hearts—as much today as in 1683 when Emperor Leopold received a letter from Mohammed IV, "King of all Earthly and Heavenly Kings," that announced:

"We have with Us thirteen kings with 1,300,000 warriors, infantry and cavalry. With this army, the like of which thou and thy followers have never seen, We will crush thy little country. . . . Firstly, We command thee to await Us in thy capital Vienna, so that We may behead thee. . . ."

But the Turks raged in vain at the gates of Vienna. The seige collapsed and the Ottoman tide receded into the Balkans. Austria exulted. Her joyous relief burst into artistic flower in the Baroque style. Mr. Bowie could feel a similar spirit of release when he toured the former Russian zone of Austria.

The people of the region tend, naturally enough, to be pockets of the many nationalities which have washed over the borders in the course of centuries.

For example, in the three towns of Oberpullendorf, Mitterpullendorf, and Unterpullendorf, near the Hungarian border, the inhabitants speak German, Hungarian, and Croatian, respectively.

Old customs hang on. When a girl is born, her parents put violets in the oven so she won't get freckles. If a boy baby stretches his hand toward money it is regretfully assumed he'll grow up a thief.

Forchtenstein Castle (below) is a towering symbol of the past. Over room after room full of muskets, clubs, armor, pikes, bayonets, and stone cannon balls stretches a great banquet hall hung with family portraits.

—Deepfreeze Desert of the North

The bleakness is relieved only during the short summer, when flowers carpet the mossy surface with swiftly-passing beauty and temperatures climb to equal those of January in the Southern United States.

To use every possible minute of warmth, many flowers push up through the last remnants of snow, like the buttercups (below, left).

Farming is impossible. The tundra gets only a little more precipitation than the Sahara, and the season of warmth—about three months—is too short for crops to grow. In most sections, soil is thin or nonexistent.

So tundra-dwellers become nomadic herdsmen like the Lapps (left), or hunters like the Eskimos and Indians of North America's tundra.

With no reindeer to provide meat, milk, and skin tents, Eskimos hunted the caribou, fox, wolf, and musk ox—at first for meat and warm clothing, later for trading to the fur-hungry white man.

Shaggy musk oxen, right, survived in large numbers on the tundra until rifles replaced Eskimos' crude weapons.

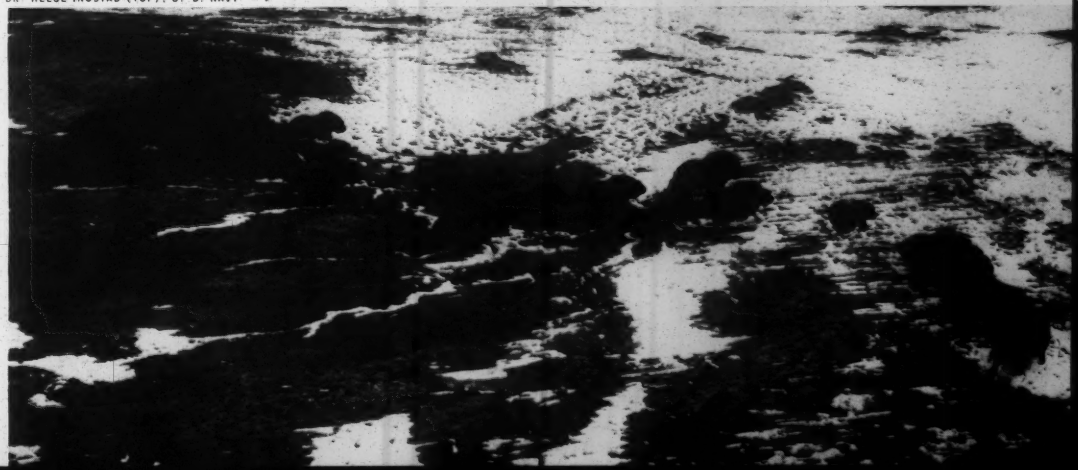
Now experimenters are testing whether the long-coated animals might profitably be raised for wool.

But the economic future of the tundra-dweller appears not to lie in hunting or herding. By 1939 mining had become more important than furs in the North American tundra. Vast deposits of iron ore, copper, lead, beryllium, asbestos, gold, coal, lithium, oil, and tin are locked in the frozen soil.

Perhaps the tundra will yet give a good living to the men who have survived its hardships so long. L. B.

WHEN ATTACKED, musk oxen stand in a circle (above) with tough bulls on the outside. This defeats wolves, but is useless against rifles.

DR. HELGE INGSTAD (TOP); U. S. NAVY



VICTOR LEON

MOTHER EARTH'S dun collar of tundra separates her cap of white polar ice from a green blouse of forests and farms. Tundra covers about as much territory as the United States, but it supports less than one person per square mile compared with 46. Probably the densest tundra population exists in Lapland where 30,000 Lapps live on 150,000 square miles. They are divided into Sea Lapps, River Lapps, and Mountain Lapps and dwell in Norway, Sweden, Finland, and Soviet Russia. Those above, in Finland, are Mountain Lapps, the only group that remains completely nomadic. This family follows its reindeer herd, seeking scant forage of stunted shrubs and small ground plants. The animals fill nearly all needs of the wasteland wanderers. Baby drinks reindeer milk, father and mother enjoy venison steak, and they wear reindeer-skin clothing.

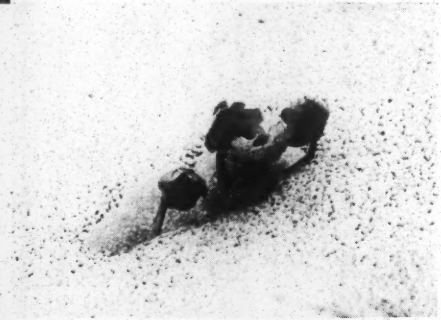
THE TUNDRA—

DESERTS don't have to be hot. Just south of Arctic ice lies the tundra, a frozen desert. It circles the world, covering northern stretches of Alaska, Canada, Greenland, Iceland, Scandinavia, and Russia.

Few plants, animals, or men can live on the tundra. Those that do must adapt themselves to harsh conditions.

Tundra is rocky, treeless, and cold—frozen solid as deep as 2,000 feet below the surface. In winter, temperatures drop to minus 40 degrees Fahrenheit, and reindeer, caribou, and musk oxen must paw the snow aside for a slim meal of moss or lichen. (See Geographic School Bulletins Vol. 37, No. 16.)

MAXCINE WILLIAMS



sidered Lincoln crude. He dressed simply, hated gloves, and loved to slouch in a chair, with his shoes off. He did not take to courtly manners.

He was born in Hodgenville, Kentucky. By the time he was 30, he had lived in Knob Creek, Kentucky, Pigeon Creek, Indiana, and four different Illinois sites. In Springfield, Illinois, he bought the only house he ever owned (below). A Lincoln Memorial Highway now marks the 425-mile pioneer trail from Hodgenville to Springfield.

Lincoln's formal schooling, according to a short autobiography he wrote by request in 1859, totaled less than one year. But he was not uneducated. He read at every opportunity. He taught himself law. Much of his education he got through his varied experiences.

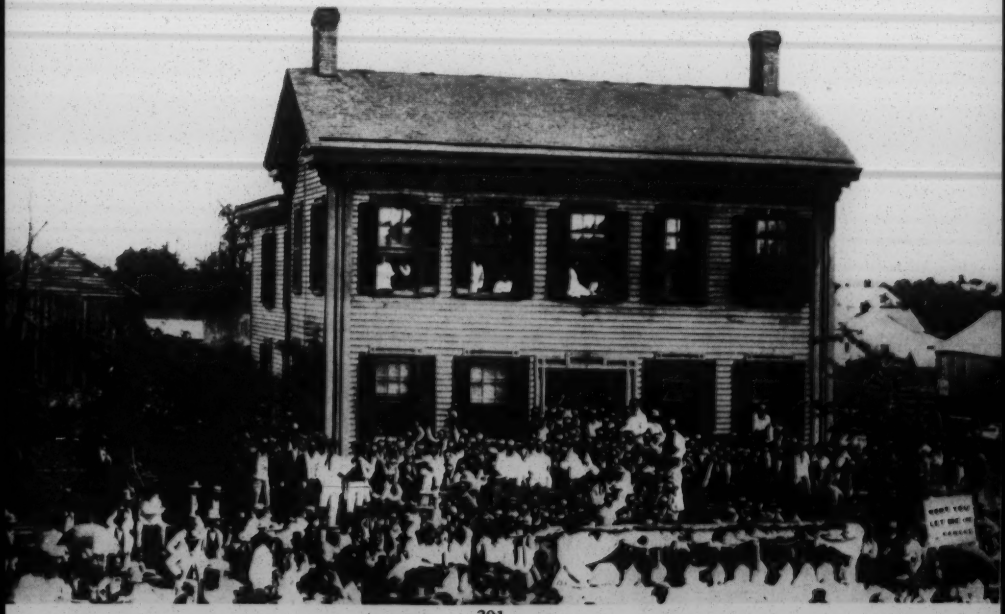
He was a rail splitter and a ferry boat operator. He clerked in a grocery, and at one time he was part owner of a store. He was postmaster of New Salem and a soldier in the Black Hawk War. Even after he became a Member of Congress, he did not forget his experiences on the frontier. His boat had once been caught on shoals, and, in 1849, he received a patent for lifting grounded boats.

Lincoln did not make an art of politics as his European critics did. He is said to have described his politics as "short and sweet, like the old woman's dance." He had two faiths: in the ability of the common man to govern himself, and in the sanctity of the Constitution as the supreme law of the land. Although he hated war, he did not hesitate to fight a bloody one to preserve his convictions and his country.

The lessons of the Great American's life shine in all corners, and his voice still speaks to the world. For echoes, read "Lincoln Sesquicentennial Handbook of Information" (20¢ Government Printing Office); "The Lincoln Ideals" (free, Box 1959, Wash., D. C.) and "Vacation Tour Through Lincoln Land," ($1.00, National Geographic, February 1952). L. B.

PRE-ELECTION RALLY, 1860: Presidential nominee Lincoln (in white suit, right of door) greets voters at his Springfield home. Near by in the former State capitol he warned his countrymen: "A house divided against itself cannot stand."

ILLINOIS STATE HISTORICAL SOCIETY



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THE NATION honors a tall man of history in a year-long celebration of his 150th birthday, which falls this week. The Lincoln Sesquicentennial Commission, set up by Congress, coordinates activities. Carl Sandburg, noted Lincoln scholar, will address Congress February 12 at 11:00 a.m. A new Lincoln penny makes its bow the same day. Special stamps will commemorate important Lincoln events. Pageants will recreate phases of his life.

Lincoln Speaks to the World

MIN YU, MIN CHIH, AND MIN HSIANG are the three rules on which the first president of modern China, Sun Yat-sen, based his new government. Translated, they mean the people to have, the people to govern, and the people to enjoy. They are based on Abraham Lincoln's ringing words at the dedication of the Gettysburg, Pennsylvania, battlefield in 1863: "government of the people, by the people, for the people."

India's Prime Minister Nehru has kept a brass cast of Lincoln's right hand on the desk of his study for years. He looks to it for inspiration.

EASTMAN KODAK COMPANY

President Sukarno of Indonesia has said that Lincoln was one of his models. An Indonesian postage stamp carries the portrait of the 16th American president as do stamps of the principality of Monaco and of the republic of San Marino on the Italian peninsula.

Visitors to the Brussels World's Fair voted Lincoln their favorite historical personage. A group of Japanese high school students named him last spring the most respected individual among "all historical figures."

The Hungarian radio, during that country's revolution in 1956, quoted the Gettysburg Address.

Today, the tall, lanky man who was born in a Kentucky log cabin 150 years ago and grew up to influence history is admired the world over.

It was not always so. During the first years of his presidency, Lincoln was criticized severely in foreign newspapers, and caricatured in their cartoons. They called him crude and politically indecisive.

European monarchies, where pomp and ceremony ruled, might well have con-

geoned into Oregon's next-to-largest industry. First farmers were share croppers for the fur companies along the fertile Willamette Valley. Only 25 years after the Hudson's Bay Company staked them to tools and seed-wheat to be repaid in kind, Oregon Territory farmers enjoyed an unexpectedly rich harvest.

The rush of Forty-Niners to the California gold fields rocketed wheat to six times its normal value. Stay-at-homes sowed and reaped their "gold."

Wheat growing centers in the dry, rolling country of eastern Oregon. Here, too, are wide grazing areas for cattle and sheep. The Willamette Valley—goal of most early immigrants—has developed widely diversified agriculture.

Early spring brings bands of migrant pickers northward from California to begin season's harvests with the succulent strawberry. School children join the picking when classes are out, as fruits and vegetables and nuts ripen in their turn—cherries, beans, peas, peaches, pears, beets, broccoli, plums, prunes, pumpkins, corn, and, finally, filberts and walnuts.

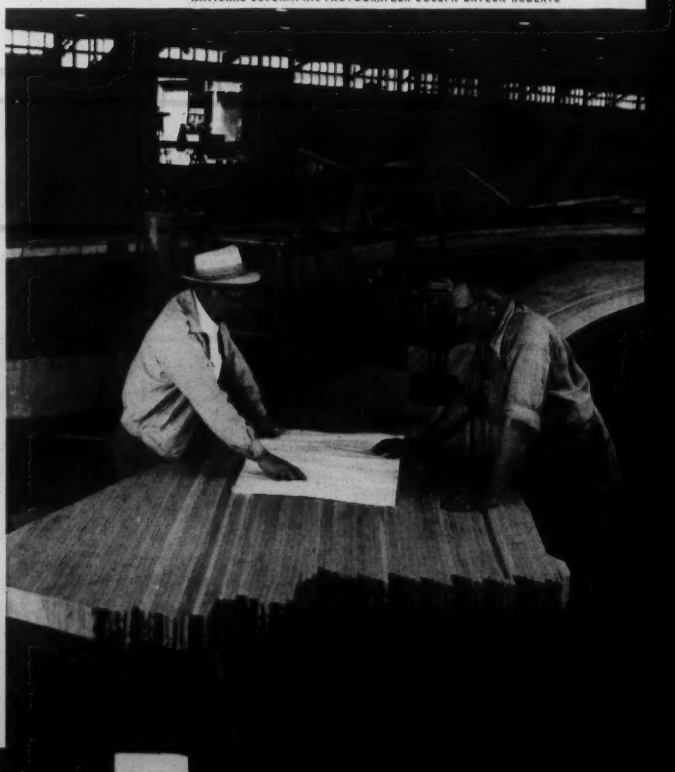
Each day's pick is processed quickly in the many plants dotting the growing area. The nation's frozen food industry began in Salem, the capital city, in 1900. Today Salem is the nation's second leading processor of canned foods, exceeded only by San Jose, California.

The frosty-peaked Cascade Range, which slices Oregon into east and west sections, is responsible for major differences in climate and topography. Warm, moisture-rich winds from the Pacific cross over the relatively low Coast Range. Beyond the Willamette, the Cascades force the air up and the remaining water drops out. Eastern and western slopes of the Cascades are almost abruptly different.

Looking eastward from the city of Portland, sprawled out where the Willamette joins the Columbia, white-spired Mount Hood forms a magnificent backdrop. To travelers coming west across the high, dry plateau, Hood seems to rise eerily out of sagebrush and stunted juniper lands.

Center of the development of the Northwest, the Columbia River is the key to future

NATIONAL GEOGRAPHIC PHOTOGRAPHER JOSEPH BAYLOR ROBERTS



LAMINATION sparks the revival of wood in heavy building. Gluing and clamping together a number of boards forms a strong, light, cheap structural material.

Especially suitable in the construction of arches, it has benefited by the current church-building boom. Biggest boost came during World War II when it was used for assembly plants, airplane hangars, and ship keels.

The newest product to trim waste and stretch Oregon's timber resources is particle board, made from chips, shavings, and flakes shaped into panels by heat and pressure.

OREGON

Proudly Shows Off Its 100-Year Growth

COVERED WAGONS will roll and pony express riders will carry the mail as Oregon celebrates its 100th birthday on Valentine's Day.

For a hundred days this summer, an Exposition and International Trade Fair will flourish in Portland on the banks of the Columbia River. Visitors will have an opportunity to fish for trophies like the 53-pound salmon at right. Here, little more than a century ago, hardy trappers did a brisk business in beaver pelts.

Today the Beaver State's biggest business grows out of its tall timber.

Green mountains show swatches of brown logging operations. The earth shudders as giants topple. Mounds of huge logs pyramided on freight cars snake along the valleys to mills and factories such as those at Oregon City on the Willamette River below.

Oregon's harvest from 30 million acres of woodland provides one-fourth of United States lumber.

PHOTO-ART COMMERCIAL STUDIOS

SALMON like this lure fishermen to Oregon. The State stocks 12,000,000 fish annually in its lakes and 15,000 miles of streams.

RAY ATKESON

In laboratories, scientists constantly seek new, better, and more marketable materials from wood. The goal: to use every part of the log that comes into the mill over the bull chain. Research already has developed veneer and plywood plants, pulp and paper mills. Wood chemistry is suspected of having many more tricks up its sleeve.

The laminated wood "Decahedron" towering over the 165-acre grounds as the symbol of the Exposition provides strong contrast to the hand-hewed log cabin shelters put up by pioneers who followed the Oregon Trail. (GSB Vol. 35, No. 23.)

The early settlers' efforts to provide themselves with food has bur-

JOHN E. FLETCHER, NATIONAL GEOGRAPHIC STAFF

industrial growth. The boundary between most of Oregon and Washington, the Columbia boasts a basin estimated to contain more than one-third of the potential water power of the United States.

Massive walls of concrete such as Bonneville, The Dalles, Chief Joseph, and McNary Dams harness rushing waters to turn turbines, irrigate farmland, control floods.

Fish ladders built around the dams allow salmon to reach spawning grounds in the Columbia's headwaters. Commercial fisheries center activities where the river empties into the sea near Astoria. Salmon is Oregon's most lucrative fish, but smelt, sturgeon, tuna, and shrimp contribute to the State's economy.

Cheap power attracts more and more industry to the West. World War II shipbuilding yards in Portland brought in a new wave of immigrants. Aluminum is growing in importance. Barges chug up and down the Columbia. Ships from all over the world ease into Portland harbor, 100 miles from the Pacific—ranking it third among West Coast ports.

Oregon's scenery beckons many visitors. Mount Hood is popular for winter sports. Crater Lake, above, visited by a skiing party, is unbelievably blue. The deepest lake in the U. S., it was formed by a prehistoric eruption. Wizard Island, in the center, is a small, extinct volcano. Oregon has 300 miles of rugged seashore for clam-digging, picnicking, and agate-hunting. There are 200 State parks, 12 National Forests, several awesome canyons, and rich fossil beds. F. W. R.

See Also: *National Geographic*—June 1953, "Following the Trail of Lewis and Clark" ($1.00); November 1952, "From Sagebrush to Roses on the Columbia" ($1.00); December 1946, "Oregon Finds New Riches" ($1.00). *Map*—Northwestern United States (paper, $1.00). All prices postpaid.

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